

CONSTRUCTION STANDARD SPECIFICATION**SECTION 06400****INTERIOR ARCHITECTURAL WOODWORK**

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CONSTRUCTION STANDARD SPECIFICATION

SECTION 06400

INTERIOR ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.01 SUMMARY

- A. Furnish and install architectural woodwork as shown on Contract documents, and as specified herein.
 - 1. Laminate-clad cabinets (plastic-covered casework).
 - 2. Thermoset decorative overlays.
 - 3. Plastic-laminate countertops.
 - 4. Solid-Surfacing-Material Countertops
 - 5. Hardware.
- B. Related Sections: Refer to the following sections for related work:
 - 1. Section 06100, "Rough Carpentry" for the following:
 - a. Furring, blocking, and other carpentry work concealed in the wall.
 - b. Interior carpentry exposed to view.
 - 2. Section 07900, "Joint Sealants" for caulking gap between woodwork and substrates.
 - 3. Section 09900, "Painting" for field painting of cabinets.

1.02 REFERENCES

- A. American Laminator's Association (ALA)
- B. American National Standards Institute (ANSI)
 - A208.1 Wood Particleboard
 - A208.2 Medium Density Fiberboard for Interior Use

- C. American Society of Mechanical Engineers (ASME)
B18.6.1 Wood Screws (Inch Series)
- D. American Society of Testing and Materials (ASTM)
D 523 Test Method for Specular Gloss
- E. Architectural Woodwork Institute (AWI)
AWI Quality Standards 6th Edition Version 1.1
- F. Builders Hardware Manufacturers Association (BMHA)
A156.9 Cabinet Hardware
A156.18 Materials and Finishes
- G. Federal Specification (FS)
FF-N-105 Nails, Brads, Staples, and Spikes: Wire, Cut and Wrought
- H. Hardwood Plywood and Veneer Association (HPVA)
HP 1 Interim Voluntary Standard for Hardwood and Decorative Plywood
- I. National Electrical Manufacturers Association (NEMA)
LD 3 High-Pressure Decorative Laminates
- J. National Particleboard Association (NPA)
9 Voluntary Standard for Formaldehyde Emission from Medium Density Fiberboard (MDF)

1.03 SUBMITTALS

- A. General: Submit the following in accordance with conditions of Contract and Section 01330, "Submittal Procedures."
- B. Product data for each type of product and process specified and incorporated into items of architectural woodwork during fabrication, finishing, and installation.
- C. Shop drawings showing location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.
 - 1. Show details half-size.
 - 2. Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcing specified in other Sections.

3. Show locations and sizes of cutouts and holes for plumbing fixtures, faucets, soap dispensers, and other items installed in architectural woodwork.
- D. Samples for initial selection of the following in form of manufacturer's standard color charts consisting of actual units or sections of units showing full range of colors, textures, and patterns available for each type of material indicated.
 1. Plastic laminate.
 2. Sealant color.
 3. Solid-Surfacing-Material
- E. Product certificates signed by woodwork manufacturer certifying that products comply with specified requirements.
- F. LEED Submittals:
 1. Credit EQ 4.1: Manufacturers' product data for installation adhesives, including a printed statement of VOC Content.
 2. Credit EQ 4.4:
 - a. Composite wood manufacturer's product data for each composite wood product used indicating that the bonding agent contains no urea formaldehyde.
 - b. Adhesive manufacturer's product data for each adhesive used indicating that the adhesive contains no urea formaldehyde.
 3. Credit(s) MR 4.1: Product Data indicating percentages by weight of postconsumer and preconsumer recycled content for products having recycled content
 - a. Include statement indication costs for each product having recycled content.
 4. Credit MR 7: Certificates of chain-of-custody signed by manufacturers certifying that products specified to be made from certified wood were made from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC 1.2, "Principles and Criteria". Include evidence that mill is certified for chain-of –custody by an FSC-accredited certification body.

1.04 QUALITY ASSURANCE

- A. Fabricator Qualifications: Firm experienced in producing architectural woodwork similar to that indicated for this Project, and with record of successful in-service performance, as well as sufficient production capacity to produce required units without delaying Work.

- B. Single-Source Responsibility for Fabrication and Installation: Engage qualified woodworking firm to assume undivided responsibility for fabricating, finishing, and installing woodwork specified in this Section.
- C. Quality Standard: Except as otherwise indicated, comply with AWI Quality Standard "Architectural Woodwork Quality Standards" for grades of interior architectural woodwork, construction, finishes, and other requirements.
- D. Source of Cabinet Accessories: Provide accessories obtained from one single source for each type of hardware and accessories so that finishes match.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Protect woodwork during transit, delivery, storage, and handling to prevent damage, soilage, and deterioration.
- B. Do not deliver woodwork until painting and similar operations that could damage, soil, or deteriorate woodwork have been completed in installation areas. If woodwork must be stored in other than installation areas, store only in areas whose environmental conditions meet requirements specified in Article 1.06, "Project Conditions."

1.06 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet-work is completed, and HVAC system is operating and will maintain temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Field Measurements: Where woodwork is indicated to be fitted to other construction, check actual dimensions of other construction by accurate field measurements before fabrication, and show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delaying Work.
 - 1. Verify locations of concealed framing, blocking, reinforcements, and furring that support woodwork by accurate field measurements before being enclosed. Record measurements on final shop drawings.
 - 2. Where field measurements cannot be made without delaying Work, guarantee dimensions for accurate fit and proceed with fabricating woodwork without field measurements. Provide allowance for trimming at site and coordinate construction to ensure that actual dimensions correspond to guaranteed dimensions.

1.07 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural woodwork can be supported and installed as indicated.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. General: Provide materials that comply with requirements of AWI quality standard for each type of woodwork and quality grade indicated and, where the following products are part of interior woodwork, with requirements of referenced product standards that apply to product characteristics indicated:
 - 1. Medium-Density Fiberboard: ANSI A208.2.
 - 2. Particleboard: ANSI A208.1, Grade M-2.
 - 3. Formaldehyde Emission Level for Medium-Density Fiberboard: Comply with requirements of NPA 9.
- B. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated, or if not indicated, as required by woodwork quality standard.

Available Manufacturers: Subject to compliance with requirements, provide high pressure laminates by one of the following:

Formica Corp.
Nevamar Corp.
Pioneer Plastics Corp.
Ralph Wilson Plastics Co.

- C. Adhesive for Bonding Plastic Laminate: Waterbase contact cement.
- D. Thermoset Decorative Overlay: Decorative surface of thermally fused polyester or melamine-impregnated web, bonded to specified substrate and complying with ALA 1992.
- E. Solid-Surfacing Material: Homogenous solid sheets of filled plastic resin complying with ISSFA-2.
 - 1. Available Manufacturers: Subject to compliance with requirements, provide Solid Surfacing Material by one of the following.
 - a. Avonite, Inc
 - b. E.I. du Pont de Nemours & Company
 - c. Formica Corporation.
 - d. Nevamar Company, LLC; Decorative Products Div
 - e. Wilsonart International; Div. of Premark International, Inc

2.02 CABINET HARDWARE AND ACCESSORY MATERIALS

- A. General: Provide cabinet hardware and accessory materials associated with architectural cabinets.
- B. Cabinet Hardware Schedule: Refer to Contract Drawings for schedule of required cabinet hardware for architectural cabinets.
- C. Hardware Standard: BHMA A156.9
- D. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for type of finish.
- E. For concealed hardware provide manufacturer's standard finish that complies with product class requirements of BHMA A156.9.

2.03 INSTALLATION MATERIALS

- A. Screws: Select material, type, size, and finish required for each use. Comply with ASME B18.6.1 for applicable requirements.
- B. Nails: Select material, type, size, and finish required for each use. Comply with FS FF-N-105 for applicable requirements.
- C. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed steel or lead expansion bolt devices for drilled-in-place anchors.

2.04 FABRICATION, GENERAL

- A. Interior Woodwork Grade: Provide interior woodwork complying with referenced quality standard and of the following grade.

Grade: Custom.
- B. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to relative humidity conditions existing during time of fabrication and in installation areas.
- C. Fabricate woodwork to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:

Corners of cabinets: 1/16-inch (1.59-mm).
- D. Complete fabrication, including assembly, finishing, and hardware application, before shipment to Project site to maximum extent possible. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
- E. Shop-cut openings, to maximum extent possible, to receive hardware, appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce

accurately sized and shaped openings. Smooth edges of cutouts and, where located in countertops and similar exposures, seal edges with water-resistant coating.

- F. Furnish and deliver to the building all hardware items not shop installed, complete with templates, keys, screws and hardware manufacturer's installation directions.

2.05 LAMINATE CLAD CABINETS (PLASTIC-COVERED CASEWORK)

- A. Quality Standard: Comply with AWI Section 400.
 - 1. AWI Type of Cabinet Construction: Flush overlay.
 - Reveal Dimension: As indicated on Contract documents.
 - 2. Colors, Patterns, and Finishes: As selected at time of submittals from manufacturer's standard color samples, unless noted otherwise elsewhere in Contract documents.
- B. Laminate Cladding for Exposed Surfaces: High-pressure decorative laminate complying with the following requirements:
 - 1. Horizontal Surfaces Other Than Tops: GP-28, 0.028-inch- (0.071-mm-) nominal thickness.
 - 2. Postformed Surfaces: PF 42, 0.042-inch- (1.07-mm-) nominal thickness.
 - 3. Vertical Surfaces: GP-28, 0.028-inch- (0.071-mm-) nominal thickness.
 - 4. Edges: GP-28, 0.028-inch (0.071-mm-) nominal thickness.
- C. Materials for Semi-exposed Surfaces: Provide surface materials indicated below.
 - 1. Surfaces Other than Drawer Bodies: High-pressure decorative laminate, Grade GP-28, 0.028-inch (0.071-mm) nominal thickness.
 - 2. Drawer Sides and Backs: Thermoset decorative overlay.
 - 3. Drawer Bottoms: Thermoset decorative overlay.

2.06 COUNTERTOPS

- A. Quality Standard: Comply with AWI Section 400.

- B. Type of Top: High-pressure decorative laminate complying with the following:
 - 1. Grade: GP-50, 0.050-inch (1.27-mm) nominal thickness.
 - 2. Colors, Patterns, and Finishes: As selected at time of submittals from manufacturer's standard color samples, unless noted otherwise elsewhere in Contract documents.
 - 3. Edge Treatment: As indicated on Contract documents.
 - 4. Core Material: Medium-density particleboard.

2.07 SOLID-SURFACING-MATERIAL COUNTERTOPS

- A. Grade: **Custom**
- B. Solid-surfacing-Material Thickness: 3/4 inch (19mm)
- C. Colors, Patterns, and Finishes: Provide materials and products that result in colors of solid-surfacing material complying with the following requirements:
 - 1. As selected from manufacturer's full range
- D. Fabricate tops in one piece, unless otherwise indicated. Comply with solid-surfacing-material manufacturer's written recommendations for adhesives, sealers, fabrication and finishing.
 - 1. Fabricate tops with shop-applied edges of materials and configuration indicated on the contract documents.
 - 2. Fabricate tops with backsplashes for field application.
- E. Install integral sink bowls in countertops in shop.
- F. Drill holes in countertops for plumbing fittings and soap dispensers in shop.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Condition woodwork to average prevailing humidity conditions in installation areas before installing.
- B. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including back priming and removal of packing.

3.02 INSTALLATION

- A. Quality Standard: Install woodwork to comply with AWI Section 1700.

- B. Install woodwork plumb, level, true, and straight with no distortions. Shim as required with concealed shims. Install to tolerance of 1/8-inch in 96-inches (3.18-mm in 2438-mm-) for plumb and level (including tops).
- C. Scribe and cut woodwork to fit adjoining work, and refinish cut surfaces or repair damaged finish at cuts.
- D. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure to grounds, stripping and blocking with countersunk, concealed fasteners and blind nailing as required for complete installation.
- E. Cabinets: Install without distortion so that doors and drawers fit openings properly, and are accurately aligned. Adjust hardware to center doors and drawers in openings, and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.

Install cabinets with no more than 1/8-inch in 96-inch (3.18-mm in 2438-mm-) sag, bow, or other variation from a straight line.

- F. Tops: Anchor securely to base units and other support systems as indicated. Caulk space between backsplash and wall with specified sealant.
 - 1. Install countertops with no more than 1/8 inch in 96-inch (3.18-mm in 2438-mm-) sag, bow, or other variation from a straight line.
 - 2. Secure backsplashes to tops with concealed metal brackets at 16-inches (406.4-mm-) o. c.
 - 3. Align adjacent solid-surfacing-material countertops and form seams to comply with manufacturer's written recommendations using adhesive in color to match countertop. Carefully dress joints smooth, remove surface scratches, and clean entire surface.

3.03 COORDINATION

Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other sections to ensure that interior architectural woodwork can be supported and installed.

3.04 ADJUSTING AND CLEANING

- A. Repair damaged and defective woodwork where possible to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean, lubricate, and adjust hardware.
- C. Clean woodwork on exposed and semi-exposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

3.05 PROTECTION

Provide final protection and maintain conditions, in a manner acceptable to Sandia Delegated Representative that ensures that woodwork is without damage or deterioration at time of Substantial Completion.

END OF SECTION